



SteelEye

REALTIME PROFESSIONAL HYBRID DVR

Desktop or wall-mount version

INSTALLATION AND USER MANUAL

VER. 1.1 1-2012 EN

Information ownership

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Declaration of conformity

This equipment was designed according to the quality, reliability and performance criteria adopted by Teledata.

Equipment must be professionally installed according to current regulations.

SteelEye equipment meets the following directives:

- EMC Directive (EMC) **2004/108/EC**
- Low Voltage Directive (LVD) **2006/95/EC**

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1. General information

This manual SteelEye installation and user manual.

- Version 1.1
- Month and year of print: January 2012

Information on software SteelEye software version: 6.2.x

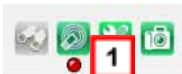
Manual addressees This manual is addressed to the following individuals:

Installation technicians This manual is addressed to technicians who have the skills required to install a surveillance system. Minimum requirements include knowledge of the technical features of the wires and terminals to be used and the best image acquisition device installation methods.

Administrators Surveillance system administrators are usually in charge of checking and exporting registrations. If authorized, they can edit installation settings.

1.1 Graphic concepts

Graphic concepts adopted in the text are illustrated below.

Page concepts	Example	Description
<i>Italic</i>	<i>See paragraph</i>	This indicates a chapter, section, paragraph, table or illustration heading in this manual or other publication of reference.
<text>	<ddmmyyyy>	This indicates a text that may have a specific value. In the example this could be "13082006".
[1]		The representation of an object on the screen (i.e.: menus, tables, etc.).



Note: important information, highlighted after the text they refer to.



Warning: operations to be carefully performed or important information.



Suggestions: practical information for good function operations.

2. Safeties and warranties

Safety rules	The information in this manual section aim to ensure that the device is correctly installed and handled. It is assumed that anyone who has to do with the device is familiar with the content of this chapter.
Warranty restrictions	Teledata is not liable for direct or indirect damages to people or property due to equipment use in conditions other than those intended. Qualified personnel must install this equipment strictly following the instructions in this manual and according to local laws, standards and safety regulations in effect. This product is guaranteed against material and factory defects for 12 months from inspection date. The warranty does not cover defects due to: • Improper use and neglect. • Damages due to exposure to the elements. • Vandalism. • Material wear. Teledata s.r.l. reserves the right to repair or replace products deemed defective at its discretion. The warranty is null and void when faults are due to improper use or operating procedures not contemplated in this user manual. For further information on warranty conditions, please refer to the purchase terms and warranty instructions available at www.teledata-i.com.
Technical support	This manual was drafted with care and is intended for qualified personnel. For any questions or special technical requests, please contact our personnel. Please write or call to contact personnel able to answer your questions and provide assistance. Service email: laboratorio@teledata-i.com Service phone number: +39 0227201352 (int.22) Service fax number: +39 022593704

3. Information on privacy

Regulations There are specific regulations on personal data acquisition, storage and processing in some countries and SteelEye falls within this context since it records and stores images and sounds.



We suggest you refer to that indicated in the governmental sites/documents in the country where the equipment is installed to ensure that its use does not violate these criteria.

Privacy management with SteelEye SteelEye has specific functions to customize the way this data can be recorded, stored and consulted to guarantee their protection in countries where required (See *chapter 16.1 Password settings*).

Compliance with Italian regulations ***For Italy: SteelEye meets Legislative decree 675/96 "Personal and individual data processing protection" as further amended. The images in this equipment cannot be modified in any way.***

Liability ***Teledata is not liable for the incorrect use of recorded personal data.***

4. Equipment management

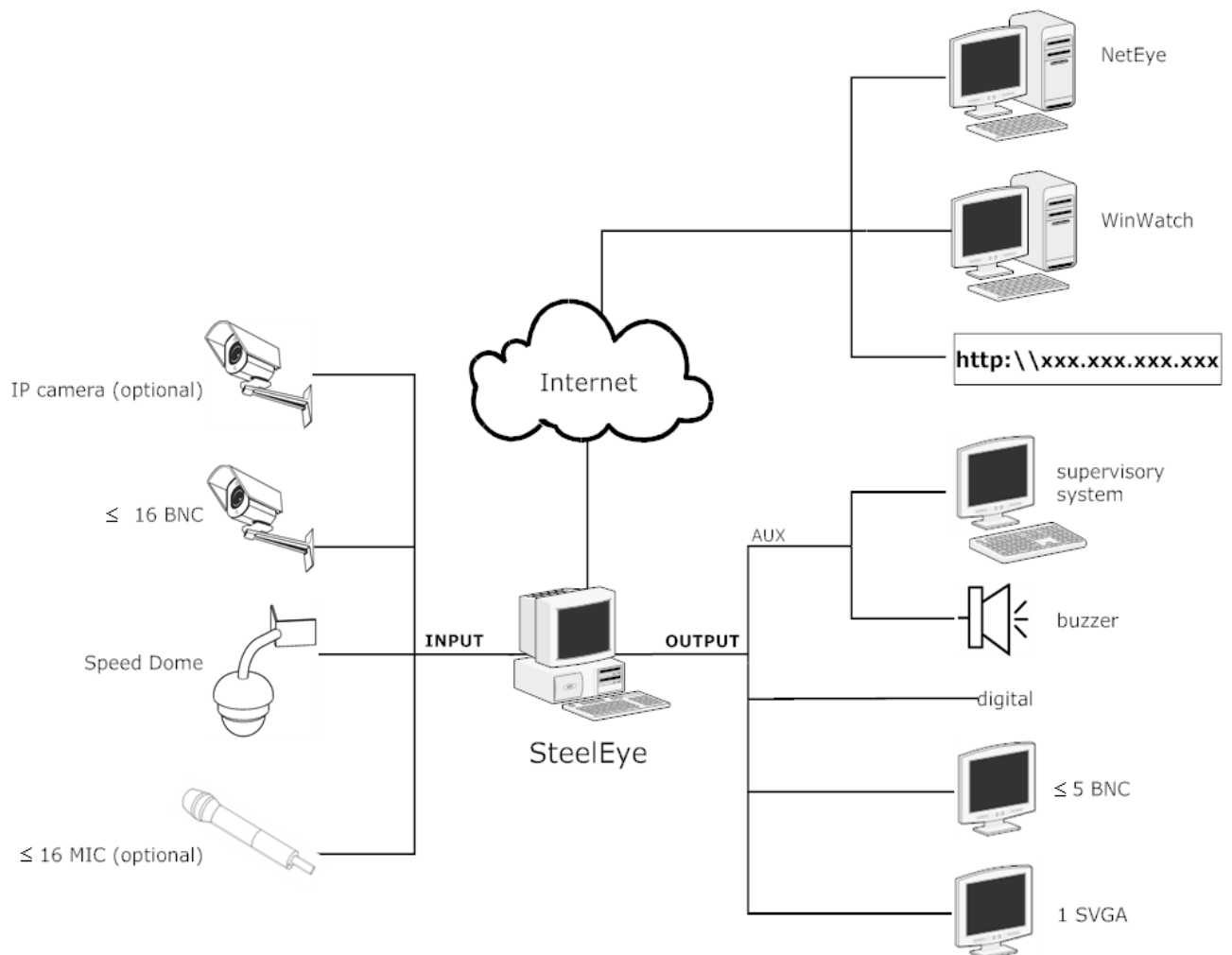
Transportation	Once the equipment is carefully packaged and boxed, typical precautions must be taken during transport meaning the box must be positioned and secured to avoid tipping or falling that could damage equipment. Temperature limits must also be observed.
Environmental conditions	Observe temperature limits: • -10° / +55°C for storage and transport. • 0° / +55°C for operations.
Unpacking	Upon receiving the equipment, carefully unpack, being careful to dispose waste according to current waste disposal regulations.
Replacement	To replace obsolete equipment, disconnect it and connect the new device according to the relevant installation diagrams. Dispose of the old equipment according to current waste disposal regulations.
Disposal	Avoid destruction by incineration and disposal in waterways. The product must be safely disposed. Before disposal, batteries must be removed from all products containing batteries being careful to avoid short circuits. Observe current regulations for battery disposal.

5. Application and scope

SteelEye is a professional DVR (Digital Video Recorder) that acquires video images from local video cameras.

It can be included in a LAN or installed stand alone. Connected to a network, it can be controlled via:

- NetEye (supervisory system)
- WinWatch (supervisory system)
- Remote terminal via browser



It acquires video signals from local video cameras, digital inputs and a serial port set for connection to Speed Dome video cameras. It controls a main and service monitor in output.

Locally, it can be connected to a supervisory system or signaling device to communicate any system faults.



Expansions are foreseen for IP video camera and audio input control.

6. Main features

Surveillance	Alarms: • Video loss • Video blinded • Failed recording • Motion detection • Digital input activation Video input masking function. Privacy: • area filtering • timed recording • time range timelapse System log for: • Operations • Errors • Events
Fault	Watchdog hardware. Guaranteed simultaneous base functions: REC + RTV + PLAYBACK + VIDEOSERVER + REMOTEPLAYBACK
Security and privacy	Data security guaranteed recorded via CRC and CRYPTO. Several level password administration, compatible with domestic Privacy regulations.
Video	16 analog video inputs with PAL and NTSC standards, not combined. Video compression algorithms: H264, MPEG4 (XVID), MJPEG Frame Rate 400/480 fps (PAL/NTSC) Multiformat: CIF, 2CIF (D2), 4CIF (D1) Proportional Codec (proprietary) Independent video controls (Bright, Contrast, Sat, Hue) for each channel Video Real time display on HMO with various presentation solutions. Circular recording.
Monitor	5 analog monitor outputs managed by an internal video matrix for sequential, programmable video input display.
On-Screen Display (OSD)	Programmable for each video camera and on 3 service monitors.

Playback	Simultaneous playback on several channels. Recorded image stream search. Search with motion detection.
Recording	Possibility of varying ftp on motion alarm.
Audio	Audio output. 16 audio inputs (optional).
Speed Dome	Maximum addressing up to 32 Speed Domes via two RS485 serial lines. Speed Dome PELCO protocol control even remote.
Digital inputs	16 opto-isolated digital inputs with programming for: • Polarity • Mode (impulse/continuous) • Work time range • Activation time And function links: • Alarm • Preset Speed Dome • Output pilot • Recording activation
Digital outputs	16 digital outputs set as follows: • 8 open collector outputs • 4 outputs with no power contacts SPST (NO) • 4 outputs with no power contacts SPDT (NC/NO) With programming for: • Activation time • Delay time • Polarity And function links: • Alarm input • Motion alarm on at least one video camera (OR) • Motion for individual video camera • Video Loss on at least one video camera (OR) • Video Loss per individual video camera

Remote control

IP video cameras (optional).

Full remote control: Setup, RTV, PLAY.

Pan Tilt Zoom (PTZ) control even remote.

Ethernet interface (10/100/1000).

Remote connection with dynamic IP.

Video-Server operations for each channel, with the ability to transmit in a format other than the one acquired.

Data export

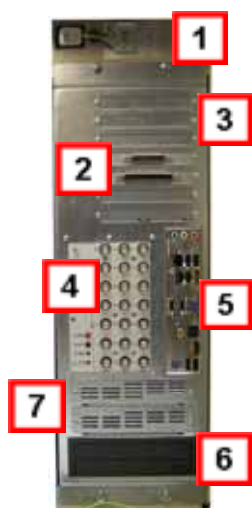
USBkey, BLUE RAY, DVD, CD, DAT.

7. Installation

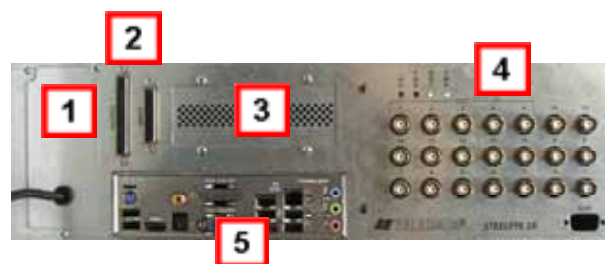
7.1 Standard accessories

- USB mouse
- Power cord
- 37-pole connector with case
- 25-pole connector with case
- Installation and user manual (this document)
- Set of two keys for door lock (wall-mount version only)

7.2 Back panel



Wall-mount version



Desktop version

Back panel area key	
1	Power 230 V. A.C. (direct socket or cord)
2	Digital inputs (25 pin), digital outputs (37 pin) including RS485 for Speed Domes.
3	18 RCA audio inputs (optional).
4	16 BNC video inputs, 5 BNC video outputs, LED, switch and AUX socket.
5	Standard PC inputs/outputs with SVGA input for main monitor.
6	CD/DVD burner (on front in desktop version).
7	Hard disk.

7.3 Back panel (detail)



I/O video area key	
HD	Disk read/write permissions.
PWR	Power on.
RST	Machine reset switch.
PWR	Machine power switch.
1..5 OUT	BNC video outputs.
1..16	BNC video inputs.
AUX	Connector for system fault communications to warning devices or local supervision systems.

8. Hardware technical specifications

8.1 Technical specifications

Description	Specification
Power voltage	230 Vac (-15% + 10%) 50/60 Hz
Operating temperature	0°C .. 55°C
Size	435x134x400 (desktop) 555x400x200mm (wall mount)
Weight	10 Kg (desktop) 15,5 Kg (wall mount)

8.2 Digital inputs

The 25-pin connector includes:

- One RS485 line (pin 1, 2) to control Speed Dome video cameras via Pelco D Protocol
- 16 inputs (pin 5..12, 14..21)

The following table illustrates connector pole functions:

Pin	Service	Pin	Service	Pin	Service
1	RS485 line +	10	Input 14	19	Input 3
2	RS485 line -	11	Input 15	20	Input 2
3	GND	12	Input 16	21	Input 1
4	-	13	GNDA	22	Shared voltage input
5	Input 9	14	Input 8	23	5Vdc insulated
6	Input 10	15	Input 7	24	GNDA
7	Input 11	16	Input 6	25	GND
8	Input 12	17	Input 5		
9	Input 13	18	Input 4		



Inputs 1..16 refer to isolated grounding and shared voltage (can be set to 5V).

If not externally powered, input 22 must be jumpered to 23 and 24 must be jumpered to 25.

8.3 Digital outputs

The 37-pin connector includes:

- One RS485 line (pin 1, 2) to control Speed Dome video cameras via Pelco D Protocol
- 4 2-contact NO relay outputs (pin 5..12)
- 8 Open Collector outputs referred to grounding (pin 20..27)
- 4 3-contact NC/NO relay outputs (pin 18,19, 28..37)

The following table illustrates connector pole functions:

Pin	Service	Pin	Service	Pin	Service	Pin	Service	Pin	Service
1	RS485 line +	10	Relay 3 (OUT 11)	19	Relay 5 NO (OUT 13 NC)	28	Relay 8 COMM (OUT 16)	37	Relay 5 COMM (OUT 13)
2	RS485 line -	11	Relay 4 (1 A , 30VDC)	20	Open Collector (OUT 8)	29	Relay 8 NC (OUT 16 NC)		
3	GND	12	Relay 4 (OUT 12)	21	Open Collector (OUT 7)	30	Relay 8 NO (OUT 16 NO)		
4	-	13	-12Vdc (100mA max)	22	Open Collector (OUT 6)	31	Relay 7 COMM (OUT 15)		
5	Relay 1 (1 A , 30VDC)	14	GND	23	Open Collector (OUT 5)	32	Relay 7 NC (OUT 15 NC)		
6	Relay 1 (OUT 9)	15	-5Vdc (100mA max)	24	Open Collector (OUT 4)	33	Relay 7 NO (OUT 15 NO)		
7	Relay 2 (1 A , 30VDC)	16	12Vdc (100mA max)	25	Open Collector (OUT 3)	34	Relay 6 COMM (OUT 14)		
8	Relay 2 (OUT 10)	17	GND	26	Open Collector (OUT 2)	35	Relay 6 NC (OUT 14 NC)		
9	Relay 3 (1 A , 30VDC)	18	Relay 5 NO (OUT 13 NO)	27	Open Collector (OUT 1)	36	Relay 6 NO (OUT 14 NO)		

8.4 AUX connector

Persistent system "standby" cause the machine to reboot (hardware watch dog).

If the application does not restart the fault is communicated via the AUX connector to any signal devices or supervision systems.

The following table illustrates connector pole functions:

Pin	Description
1	NC Fault
2	Common Fault
3..9	not used

9. First start-up

9.1 Start with optional network connection

Introduction SteelEye can be set to work in **stand alone or network mode**.

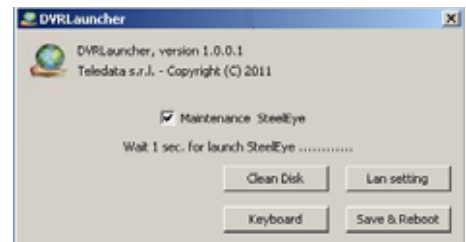
To start SteelEye in standalone mode:

1. Let the machine complete the start-up procedures until the following window appears: the application starts and starts recording.



To start SteelEye in network mode:

2. Within 10 seconds of the window appearing, click **Maintenance SteelEye**: start-up is paused.
3. Click **LAN settings** for network settings.
4. When finished, click **Save and Reboot** to save settings: the system reboots with the new settings.



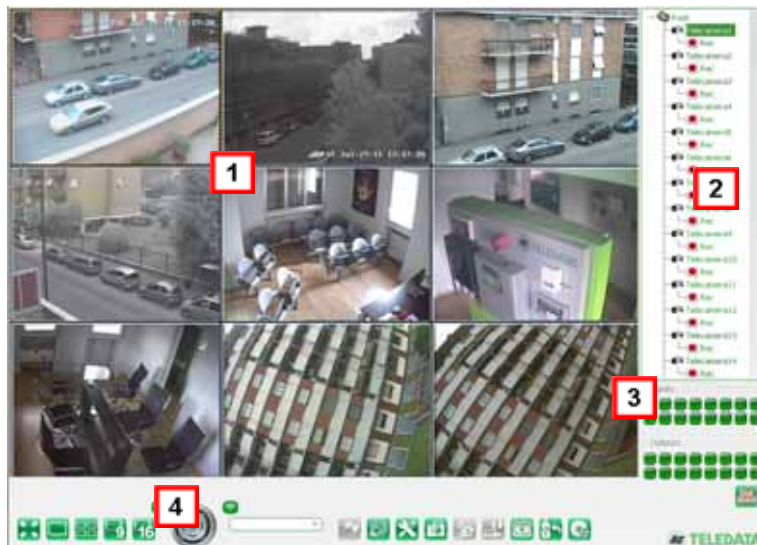
If no keyboard is installed, click **Keyboard**.

9.2 Homepage display

Introduction When started, SteelEye displays the main page or homepage.

1. The homepage appears with the images acquired by the video cameras [1], list of connected video cameras and their status [2] and input and output status [3].

2. Click  [4] to check images on all installed video cameras.



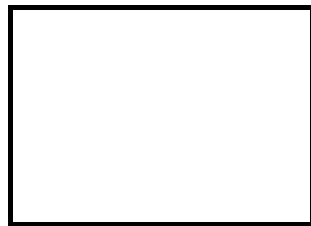
Speed Domes are not yet displayed since they must be set-up. (See *chapter 15.5 Speed Dome settings*).

10. SteelEye basic concepts

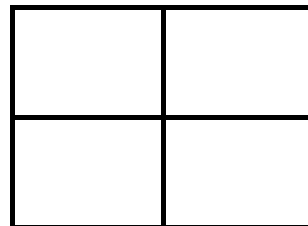
10.1 Split: display several video cameras on the main monitor

Concepts

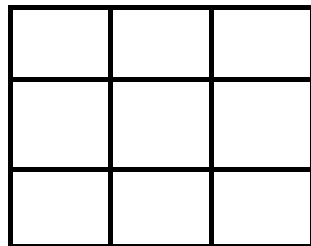
The images acquired by the connected video cameras can be viewed on the homepage as follows:



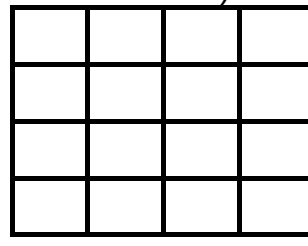
split 1
(one video camera)



split 4
(up to four video cameras)



split 9
(up to nine video cameras)



split 16
(up to 16 video cameras)



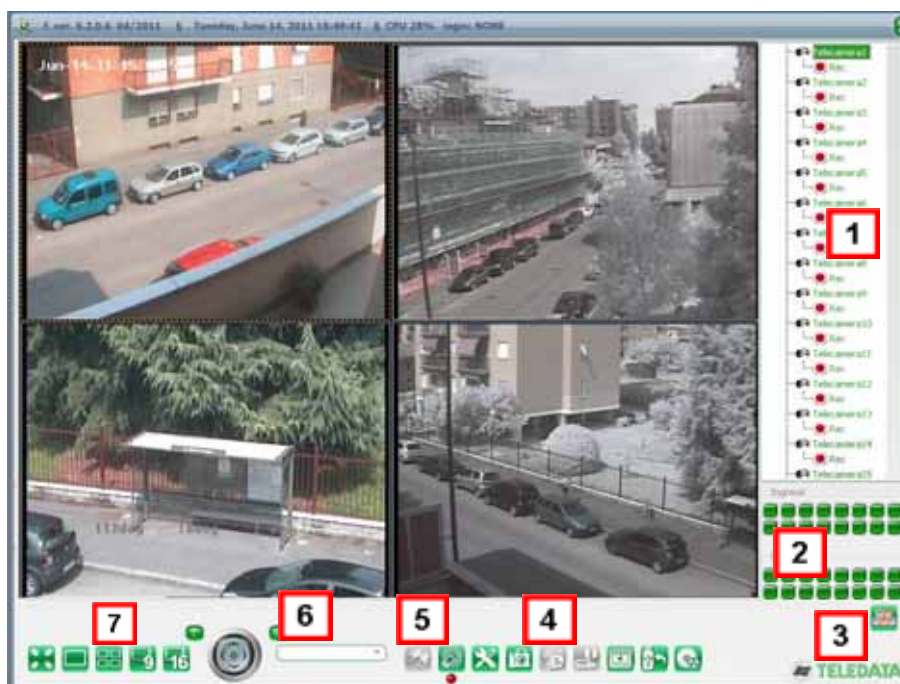
full screen
(one video camera)



11. Main monitor use

Introduction The homepage or main page is divided in different control and command areas.

Path It appears at start-up and is always displayed on secondary application pages.



Area	Description
1	Connected video camera status.
2	Digital inputs and outputs and their status.
3	Show screen keyboard.
4	Selected image snapshot.
5	Alarm acquisition.
6	Virtual joystick and default positions for Speed Domes.
7	Monitor split up to 16 different channels.

11.1 Connected video camera status.

Video cameras connected to video inputs and Speed Domes automatically appear with their recording status.

The panel displays status for all video cameras:



(red) recording



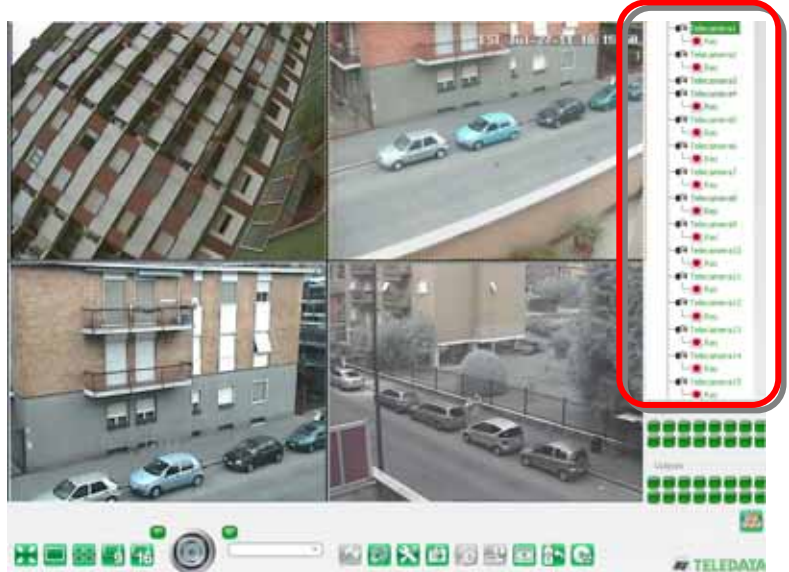
(green) connected by not recording.



If the video camera is in these conditions but was set to record, check operations.



If the corresponding window is black in this status, video camera display is not enabled.



11.2 Digital inputs/ outputs and their status.

Digital inputs and outputs automatically appear with their status.

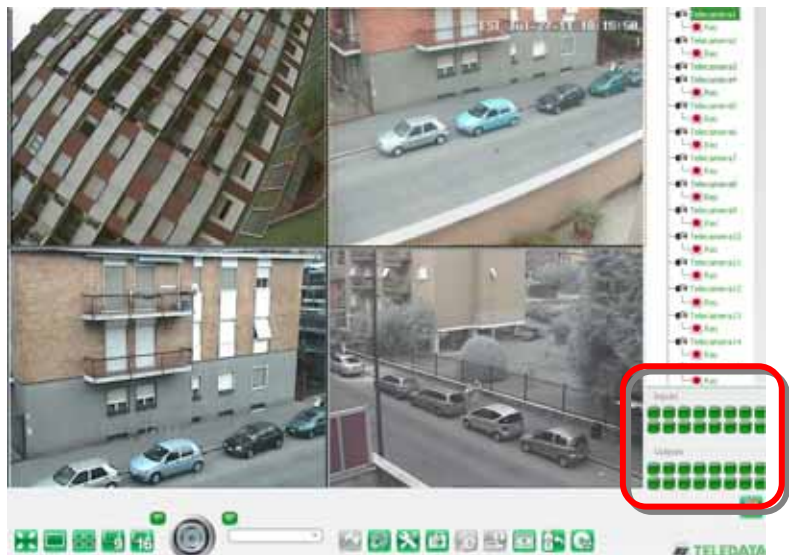
The panel shows all connected digital input and output status:



Input/output on (red)



Input/output off (green)



11.3 Assigning the video camera to monitor channels

The main monitor can display images from the 16 video cameras grouped in several channels:

- **Split 16:** 16 channels that show up to 16 video cameras
- **Split 9:** nine channels that show up to nine video cameras
- **Split 4:** four channels that show up to four video cameras
- **Split 1:** one channel that only shows one video camera

Furthermore, it can display a full-screen video camera image, excluding the control panel and video camera and input/output status.



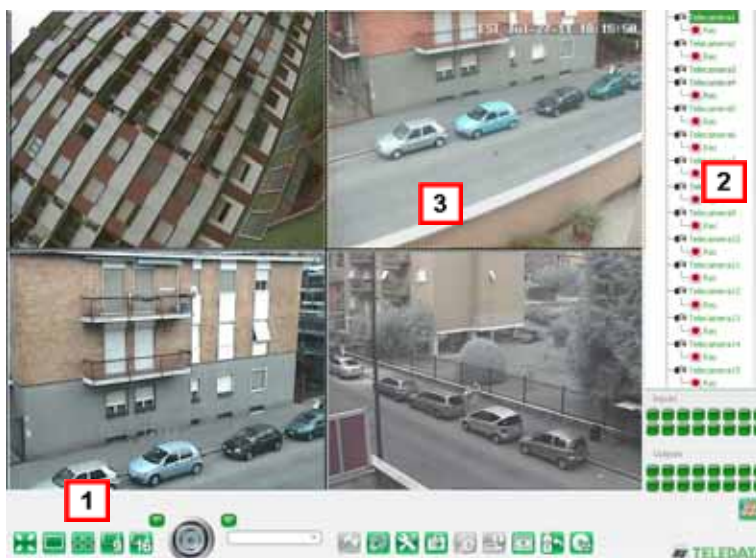
We recommend you work with the minimum split necessary for the number of installed video cameras to have the best image definition and size.

To change monitor split and assign video cameras:

1. Select one of the split modes [1].
2. Select the video camera [2] and drag it to the selected channel [3].

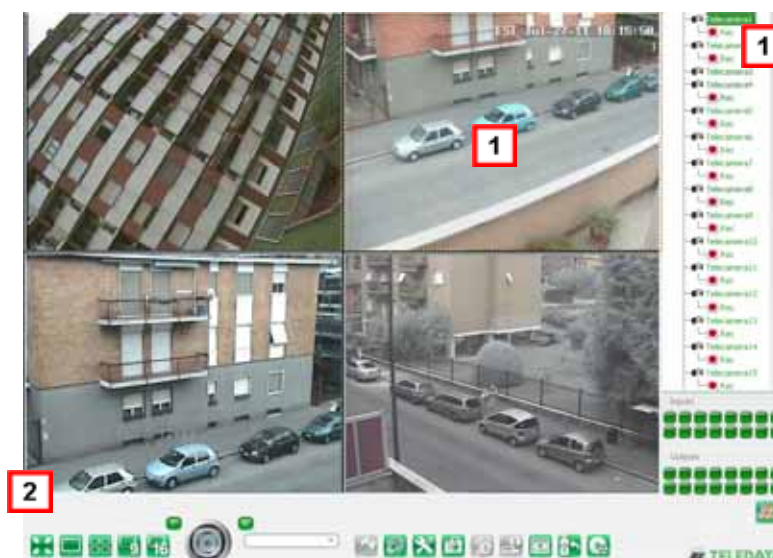


Video camera images can be displayed on one or two visible channels.



To display full-screen video camera images:

1. Select the video camera [1]
2. Click  [2]: the image is displayed full-screen.



3. Double-click any point in the image to return to the previous mode.



11.4 Show virtual keyboard

If no keyboard is installed, a keyboard can be displayed on the screen to enter settings and passwords.

To display the keyboard:

1. Click  [1]: the keyboard appears on the screen.
2. Drag it if necessary and click  to close it.



11.5 Selected image snapshot

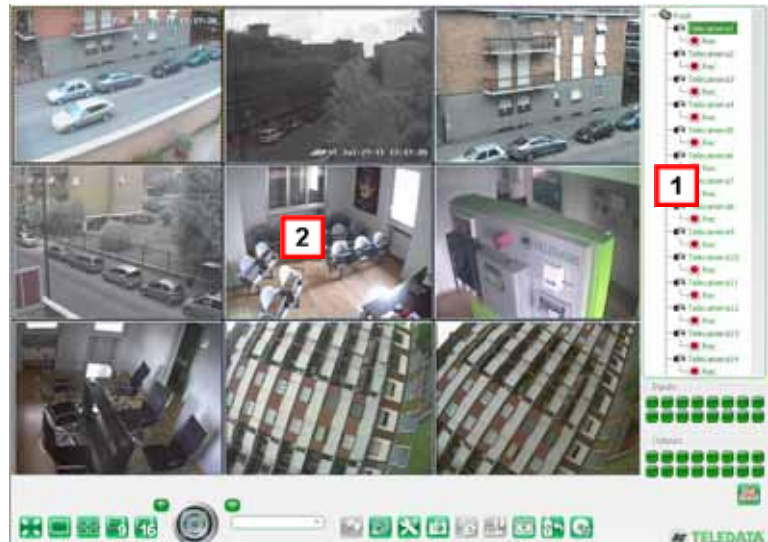
A snapshot of the selected video camera image can be taken at any time.



Snapshots can be viewed in the **Playback** panel. (See chapter 13.1 Recording playback).

To take a snapshot:

1. Select the video camera [1] or image [2] .
2. Click : the snapshot is saved.



11.6 Alarm acquisition

Alarms from inputs and outputs or image analysis (i.e.: motion) display a red LED under the acquisition button and, if set, can also activate remote devices such as, for example, a buzzer.

To mute any buzzers or interrupt actions, the alarm must be acknowledged. The alarm and its acknowledgement are logged in the log file.



Impulse relays do not require alarm acknowledgement.

To acquire an alarm:

1. Click  [1]: the red LED under the button disappears.



11.7 Virtual joystick and default Speed Dome positions

Speed Dome video cameras can be manually adjusted thanks to the joystick or can be quickly adjusted to default positions.

Speed Dome controls

Command	Description
T	To zoom in on the selected object.
W	To zoom out from the selected object.
	Joystick for all Speed Dome rotations. Rotation speed can be set.
	To select a default position.

To adjust a Speed Dome:

2. Select the Speed Dome name [1] or Speed Dome image [2].
3. Select one of the default positions [3] or move the virtual joystick to adjust the Speed Dome.



12. Opening SteelEye

12.1 Changing the Access level

Purpose

If passwords were set, the access level can be changed at any time. If passwords were not set, the system is fully accessible and the access level change function does not appear.

See chapter 16.1 *Password settings* for enabled/disabled functions for each level.



After installation, setting passwords to protect both setting data and recordings is recommended.

Path

Homepage,  Login/Logout

13. Recording and exporting

Recordings and snapshots can be viewed and exported to USB or CD/DVD support devices.

Available functions are listed below:

Button	Description
	Recording playback.
	Exporting recordings to USB keys.
	Exporting recordings to CD/DVD.

13.1 Recording playback

Purpose

The panel lets you:

- Playback all saved recordings.
- Review the video camera events and directly open the concerned recording
- View snapshots and copy them to other support devices



Only the Administrator can copy snapshots.

Description

Each video camera enabled to record has an eight-minute recording lot each. The number of recordings depends on both the recording settings and disk capacity (typically four days of recordings).

Path

Homepage,  **Playback**



Item	Description
1	List of eight-minute recordings on the hard-disk.
2	Media files: amount of recordings currently on file. Start, End: first recording, last recording and currently selected recording date-time. Search area for a certain recording.
3	List of video cameras to be selected. Event list: displays the list of events/alarms in the last 30 days for the selected video camera in the area below. Click a Motion Alarm event to directly open the recording.  If no events occurred, the area is empty. Snapshot: opens the folder with selected video camera snapshots (Administrator only). Dimens. True: displays the recording with actual image dimensions.
4	Position: Manual positioning in the recording.

To playback a recording:

1. Double-click a video camera [1].
2. Set the end period for the search [2] and click **Search**
- or
3. Select the recording from the list [3].
4. Playback the recording [4].



To display snapshots:

1. Double-click a video camera [1].
2. Click **Snapshot**: the folder [2] with the snapshots taken by that video camera appears.



To save files to a USB key, drag them to the device.



13.2 Exporting recordings to USB keys

Purpose The panel lets you export recordings available for one or more video cameras to a USB key.



To save files to CD or DVD, use the **CD/DVD burn** function.

Description Based on the selected period, the system displays the video cameras that made recordings. Some video cameras can be unselected before export.

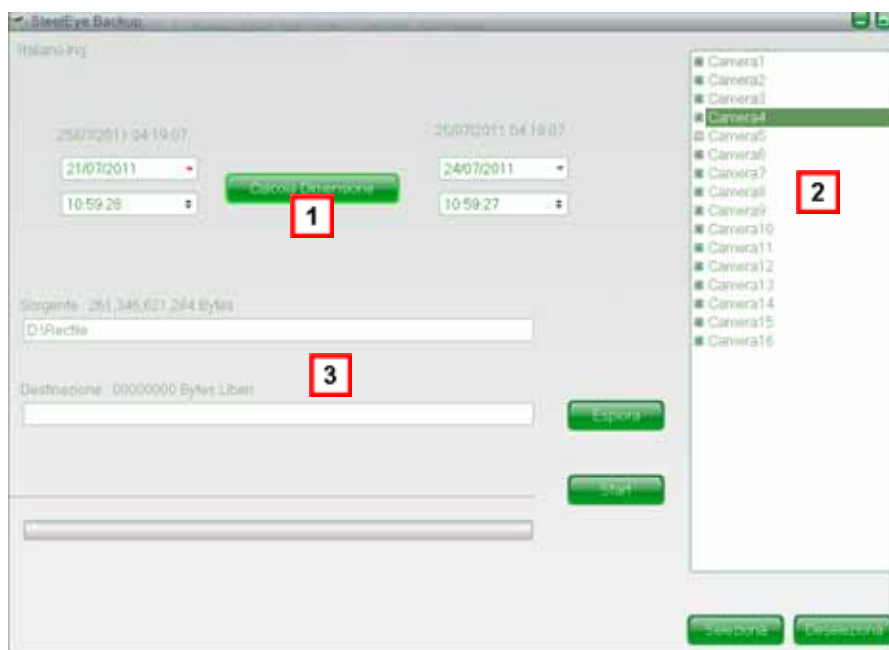


Use the **Calculate dimension** function to obtain the necessary space on the removable device.

Path



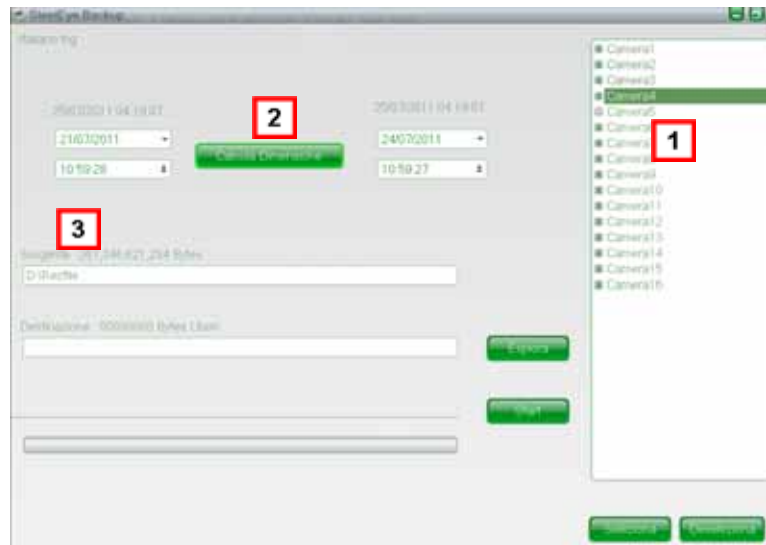
Homepage, **Backup to USB key**



Item	Description
1	Area where the recording interval is set and necessary space is calculated.
2	List of video cameras to be included in the saved file.
3	Area where necessary and available space is calculated and the saving procedure started and progress monitored.

To save several recordings:

1. Click **Select** or **Unselect** and click on the single video cameras to be included/excluded from the selection [1].
2. Set the period [2] and click **Calculate dimension**: the calculated value appears in **Source** [3].
3. Click **Explore** to select a specific folder.
4. Click **Start** to copy.



13.3 Exporting recordings to CD or DVD.

Purpose

The panel lets you save available recordings for one or all video cameras to CD or DVD.



To save files on a USB key, use the **Backup to USB key** function.

R/W support content can be deleted from this panel.

Description

The system calculates the space needed to save one or all video camera recordings and graphically displays it compared to loaded CD/DVD capacity.



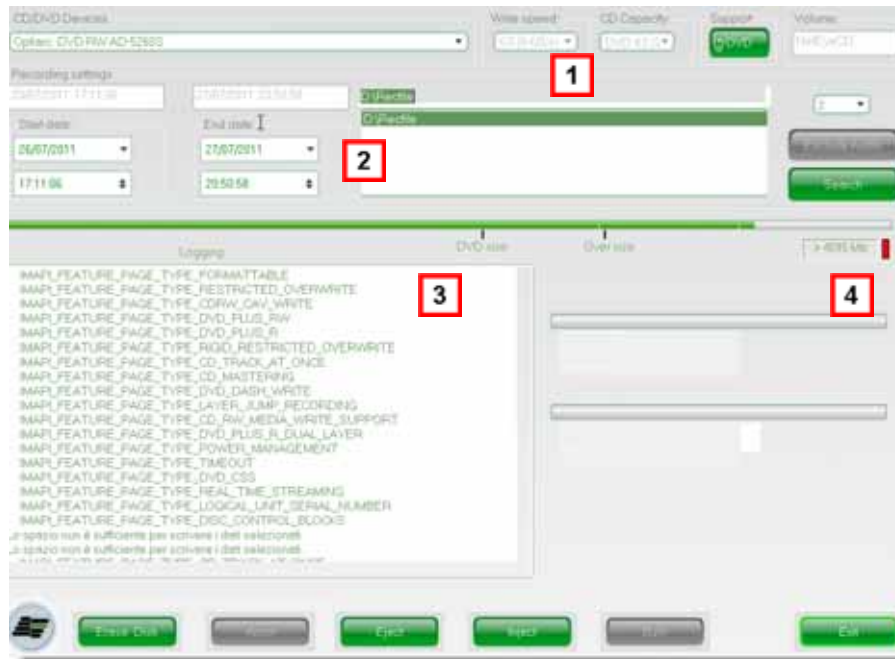
Use the **Search** function to obtain necessary space on the CD/DVD.

Abort and **Erase Disk** functions can only be applied to R/W supports.

Path



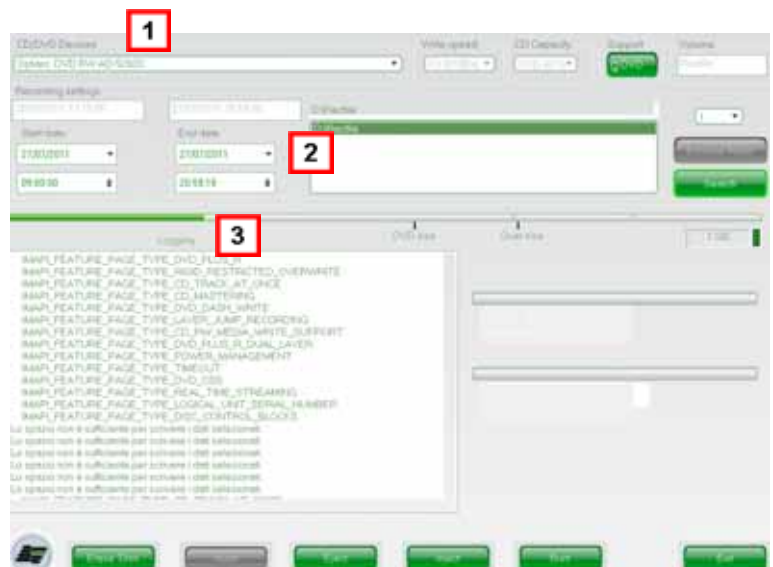
Homepage, **CD/DVD burn.**



Item	Description
1	Area where the type of CD/DVD is indicated.
2	Area where the recording interval and video cameras to be exported is indicated and where necessary space calculations is requested.
3	Area where necessary and available space, message area, save procedure and save progress is checked.
4	Signals space exceeding the loaded volume.

To export recordings for one or all video cameras to CD/DVD:

1. Set the CD/DVD and copy [1] features.
2. Set the concerned period, select one or all video cameras [2] and click **Search**: the calculated value with any overflow messages [3] appears.
3. Click **Burn** to copy.



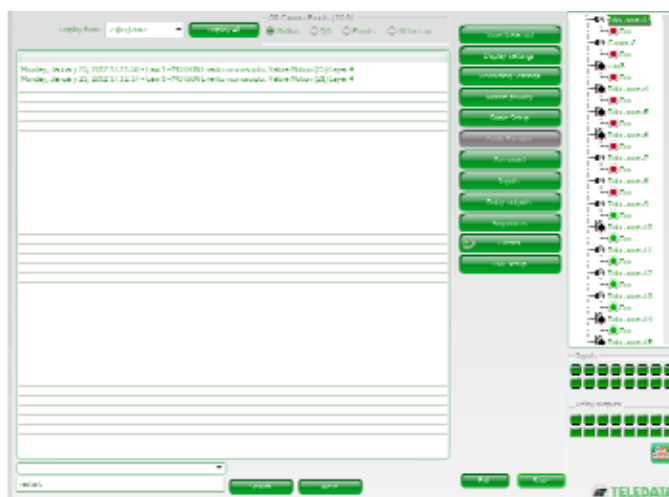
14. Monitoring alarms and events

14.1 Display daily alarm/event log

- Purpose** The **Events** panel lets you:
- view events and alarms recorded in the selected day
 - search alarm/event types for the selected video camera and search for a certain text in the message.
 - view system file content for events and records

- System file** List of saved files:
- DBEvents_xx_yy.txt: log file
 - SteelEye_xx_yy.log: record file
- Where xx è is the day in the year and yy is the year.

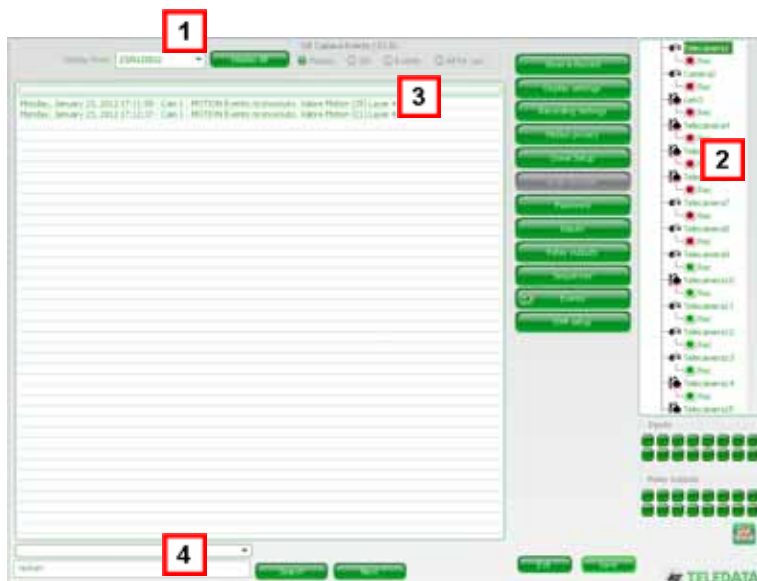
Path Homepage, , **Events**



Data	Description
Display from	Day in which alarms/events are displayed.
OR Camera Events / IO02	Allows events/alarms to be selected by type on the selected video camera. Motion: displays alarms generated by Motion analysis only. I/O: displays events tied to inputs and outputs Events: displays system events not classified as alarms. All for cam: displays all alarms/events triggered for the selected video camera.
-	List of event files and records. Double-click on the name to open the file.

To search for an alarm/event on a specific video camera:

1. Select the day [1].
2. Select the video camera [2]
3. Select the type of alarm/event [3].
4. Enter the text to be searched and click **Search** [4]
5. Continue searching by clicking **Next**.



15. SteelEye settings

Following is the suggested full SteelEye settings sequence:

Phase	Description	Panel	Page
1	SteelEye network connection	At boot, optional	13
2	Enable video camera display and recording	Show & Record	33
3	Video settings	Display settings	34
4	Recording programming and settings	Recording settings	35
5	Motion alarm programming and settings	Motion privacy	37
6	Speed Dome settings	Dome Setup	40
7	Video sequence settings	Sequences	43
8	Digital output settings	Relay outputs	44
9	Digital input programming and settings	Inputs	46

Where necessary, data access and machine settings can be password protected. See *chapter 16.1 Password settings*.



In those countries where privacy laws are in effect, this settings phase is mandatory.



Setting panels open above the homepage.

To save setting changes and remain into the panel click **Save**. To close the panel and return to homepage click **Exit**.

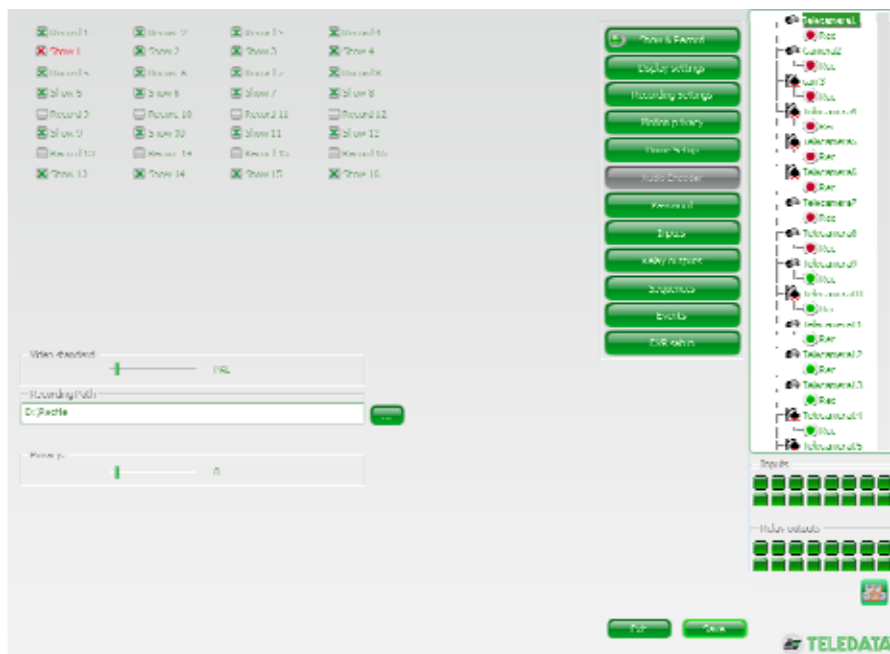
If you click **Exit** without saving before, all changes will be lost.

15.1 Enabling video cameras

Purpose The **Show & Record** panel lets the user set image monitoring and recording parameters.

Path

Homepage, , **Show & Record**



Data	Description
Record x Show x	Enable/disable the video camera x for display on main monitor and/or recording.
Video standard	Video camera horizontal and vertical acquisition resolution: - D1_PAL (720x576, PAL) 4CIF_PAL (704x576, PAL) - D1_NTSC (720x480, NTSC) 4CIF_NTSC (704x480, NTSC)
Recording path	Folder where recordings are saved.
Privacy	Days permitted by privacy regulations to keep recordings before erasing them. 0 : record until disk full, then overwrite oldest data. x : number of recording days.

15.2 Configuration display

Purpose

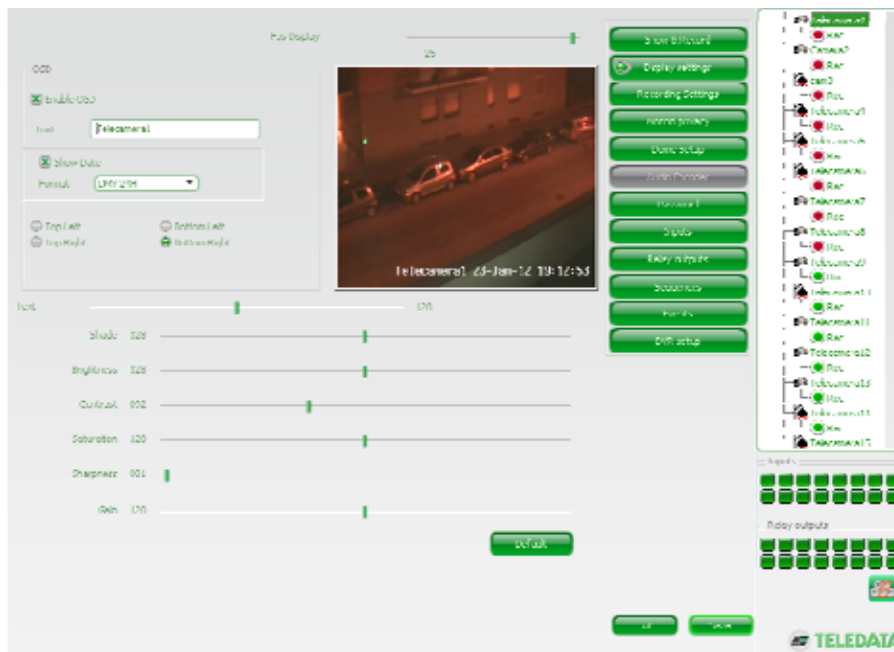
The **Display settings** lets the user set the selected video camera for:

- display frequency,
- filters,
- superimposed text and date-time.

Path



Homepage, , **Display settings.**



Data	Description
Fps display	Frame frequency acquired by the video camera and displayed on the main monitor. Number of frames per second displayed on the main monitor.  25 fps is the frequency that guarantees the best real-time recordings. Reducing the frequency risks losing important parts of objects in motion. Display frequency does not significantly affect system performance.  To set recording frequency, see the Recording settings panel.

Data	Description
OSD	Video camera name and date-time that appear in a set corner of the images transmitted on the main monitor and monitor 3. The name of the video camera also appears in the tree diagram. Enable OSD: enables indicated text display. Show date: enables date-time display in the indicated format. Top left, ...Bottom right: text and date-time positions
Translucency	Translucency intensity.
Hue, Brightness, Contrast, Saturation, Sharpness, Gain	Standard filters to be applied to images acquired by the video camera. Move the cursor to obtain a preview of how acquired images are displaced/recorded. To reset default values, click Default.

15.3 Recording programming and settings

Purpose

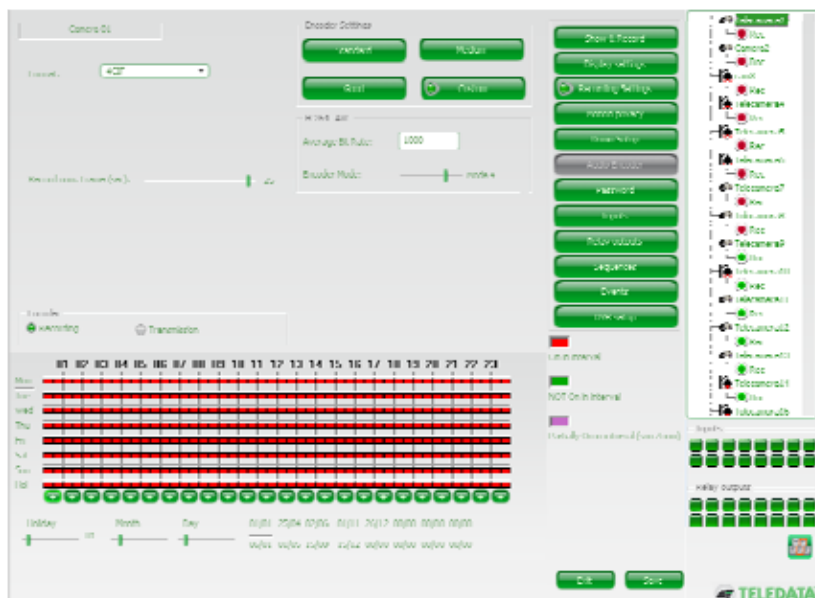
The **Recording Settings** panel lets you:

- set recording and transmission settings for the selected video camera
- schedule recordings on a weekly and holiday calendar

Path



Homepage, **Recording settings**



Data	Description
Format	Horizontal and vertical recording resolution. 4CIF 704x480 (NTSC video cameras), 704x576 (PAL video cameras) CIF: 352x240 (NTSC video cameras), 352x288 (PAL video cameras) QCIF: 176x120 (NTSC video cameras), 176x144 (PAL video cameras) 2CIF 704x240 (NTSC video cameras), 704x288 (PAL video cameras) DCIF: 528x320 (NTSC video cameras), 528x384 (PAL video cameras)  Format choice can affect system performance. We suggest using 4CIF format.
Encoder settings	Video compression format. Three suggested settings and one custom setting are included. Standard Standard image quality but higher disk space Not optimal image quality but compensated by less recording space Average Best image quality with slight increase in disk space. Good Good compromise between image quality and disk space. Custom User settings.
H.264-AVC	Parameters tied to compression settings. They can only be edited in custom settings.
Record num. Frame (sec)	Number of recorded frames.  25 fps is the frequency that guarantees the best real-time recordings. Be careful of the recording frequency affecting system performance.
Encoder	Encoder used Leave the recording encoder selected. Recording refers to the recording encoder Transmission refers to the encoder that controls images for real-time image transmission on TCP.
Calendar	Video camera operation settings on a weekly and holiday calendar by time range. See <i>chapter 18.1 Setting time bands</i> .

15.4 Video alarm programming and settings

Purpose

The **Motion privacy** panel is used to set typical video analyses and can generate alarms and program operations based on a weekly and holiday calendar.



Video analysis is normally disabled because it must be set according to real needs for the area to be monitored.

Description

The various analyses applied by SteelEye are described below:

- **Motion:** identifies objects in motion
- **Blind:** identifies video camera blind spots
- **Privacy:** hides zone display/recording

Process

Follow is the typical Motion alarm programming process:

1. Enable the type of analysis
2. For each layer, set a sensitivity threshold
3. For each layer set the image regions to be analyzed
4. Set the time ranges for analysis

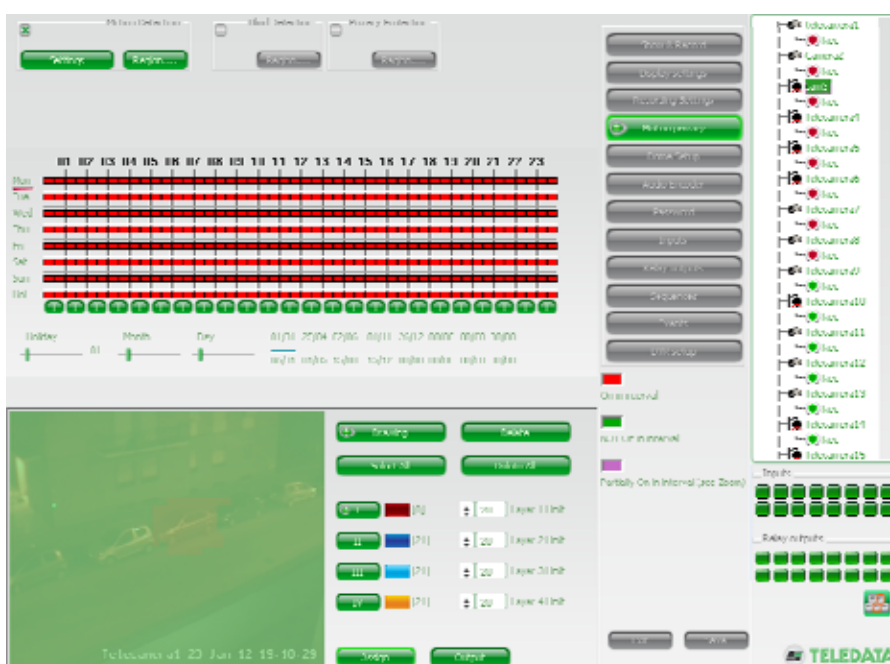


To activate an output when an alarm triggers, in the **Relay output** panel make sure the **Output on, Motion Alarm on camera X** fields are on for the output and that the video camera to be analyzed is selected.

Path



Homepage, **Motion privacy**



To set areas for Motion analysis and enable analyses:

1. Enable section **Motion Detection** [1]
2. Click **Region**
3. In **Layer threshold x** set the value of the Motion detection threshold for that region.
4. Click on the region key [2].
5. Click **Drawing** and click the points in the image to be analyzed.
6. Click **Assign** to confirm
7. Click **Save**



The colored label [2] blinks when the alarm threshold is reached.



To set Motion analysis parameters:

1. Enable section **Motion Detection** [1]
2. Click **Parameters**: the recording parameter panel appears

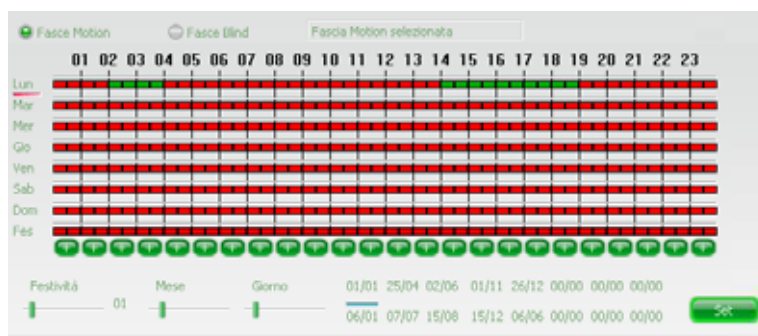


3. Enter the length of the recording after exceeding the Motion threshold
4. Click **Save**



To set time ranges for Motion analysis:

1. Set the weekly and holiday schedule (see *chapter 18.1 Setting time bands*).
2. Click **Set** to confirm



Analysis settings are very similar. A comparison table is provided below:

Function	Motion	Blind	Privacy
Region	4	1	1
Limit	one per region	1	-
Time bands	yes	yes	-

15.5 Speed Dome settings

Purpose

The panel lets you set Speed Domes connected to the system.

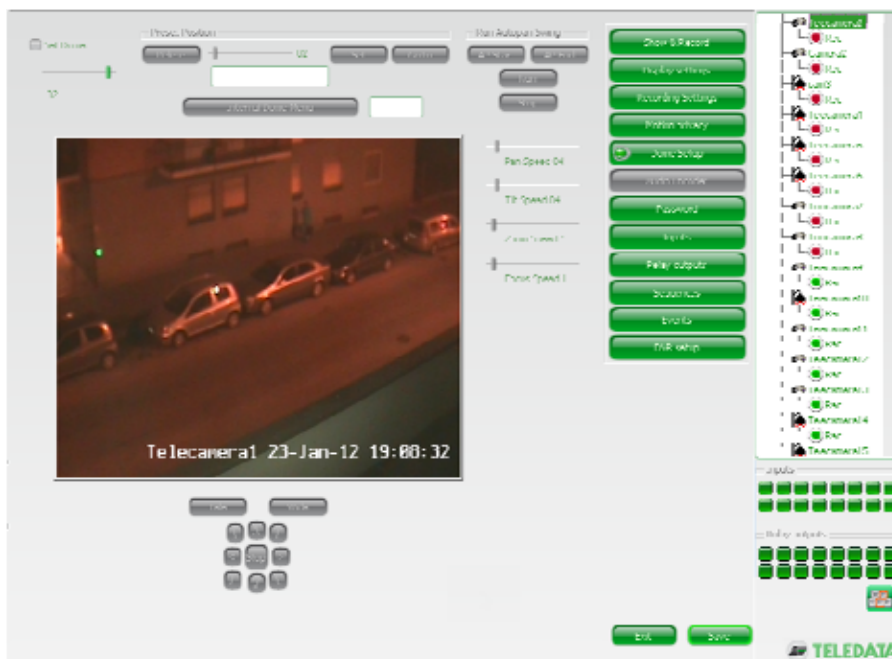


Controls sent to the Speed Dome are ineffective if the connected Speed Dome model does not support them.

Path



Homepage, **Dome Setup**



Data	Description
Set Dome	Sets the selected video camera as the Speed Dome and sets the address.  Controls sent to incorrect addresses are ignored.
Preset Position	To set up to 31 default positions.
Run Autopan Swing	To set a continuous and repetitive path from a starting point to an end point with zoom and movement speed change possibilities.

Data	Description
Pan speed Tilt speed Zoom speed Focus speed	Manual speed control for: - Horizontal rotation (pan) - Vertical rotation (tilt) - Zoom - Focus  Speeds are applied during the settings phases for: - default positions - continuous pan and in the homepage for manual positioning during surveillance.
Tele Wide \ / / < Stop > / \ \	Virtual joystick for manual Speed Dome positioning.
Internal Dome Menu	Open a window with the video camera function that corresponds to the set menu item (i.e.: enter '2' to display the function that corresponds to the second menu item in the main video camera menu)

To set a Speed Dome:

1. Double-click to select the video camera input connected to the Speed Dome **[1]**.
2. Enter the assigned physical address and click **Set Dome [2]**: the Speed Dome is now linked to the input.
3. Click **Save**



To set Speed Dome positions:

1. Set the speed **[1]** for all movements.
2. Enter the name of the first position (i.e.: North gate) **[2]**
3. Point the video camera lens using the virtual joystick **[3]**
4. Click **Set [2]**: the position is saved.
5. Continue moving the **Preset position [2]** cursor to the next position and repeat the procedure from point 4.
6. To delete a position, click **Delete**, to view the selected position, click **Go to**.
7. Click **Save**



Default Speed Dome positions must be consecutive, from 2 to 32. The names given to the positions tell the system that the position is a default position and can be selected in the homepage during surveillance.

To set Autopan:

1. Position the Speed Dome on the start position **[1]** and click **AP Start [2]**.
2. Set speeds (movement, focus and zoom) **[3]** and adjust the Speed Dome as required **[1]** using the **Tele** and **Wide** keys
3. Once the end position is reached, click **AP End [2]**.
4. To display the saved Autopan, click **Run**, to stop it click **Stop**.
5. Click **Save**



15.6 Sequence settings

Purpose

The **Sequence** panel lets the user set image sequences to be displayed on any service monitors and display the text and date-time.

The first 11 sequences are launched when an alarm triggers while the other five are linked to the five analog monitors (S12 = monitor 1, S13 = monitor 2) and act as control sequences.



To start a sequence when an alarm is triggered (i.e.: Motion) you can:

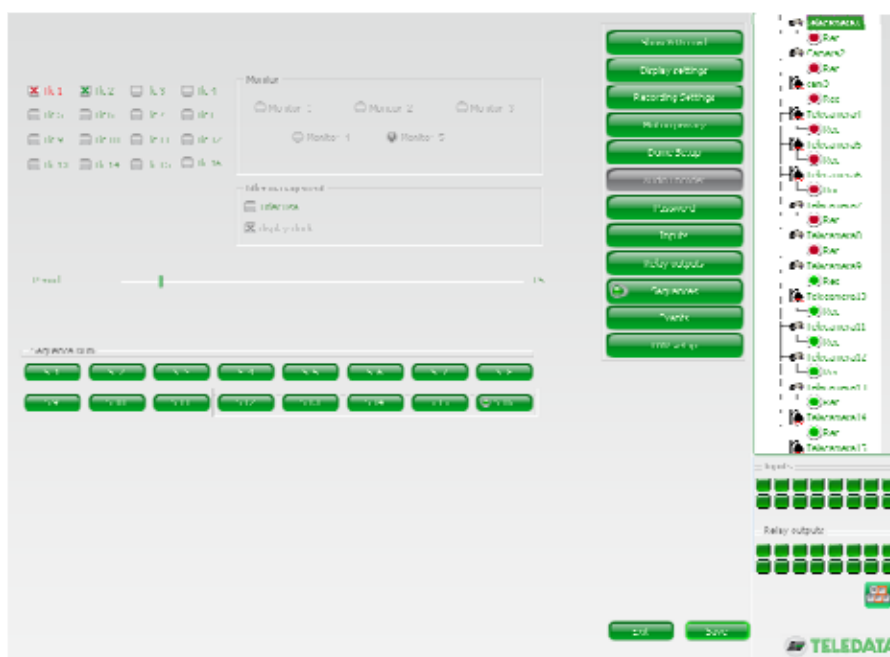
- connect a relay to an input
- link a sequence to an input

When the relay is energized due to a Motion alarm, the input is activated and starts the sequence in turn. See *chapter 15.8 Digital input programming and settings*).

Path



Homepage, **Sequences**



Data	Description
Tlc	Video cameras to be included in the sequence.
Monitor	Service monitor where the sequence is to be displayed.  If several sequences were associated with the same monitor, only the sequence with the highest ID number is displayed.

Data	Description
Period (sec.)	Length of images from the single video camera within the sequence. Total sequence length will be: Selected video cameras * Period
Sequence Num	Selection of the sequence to be set.
Title management	For service monitor number 3. Enables the display of the name assigned to the video camera (see Display Settings panel), status (>> if recording) and date/time (MBT version).

To set a sequence:

1. Select a sequence [1].
2. Select the video cameras to be included, the monitor where the sequence is to be displayed and the length of the images from the single video camera [2].
3. Click **Save**



In the **Input** panel, check whether fields **Enable** and **Sequence on** were set and that the corresponding sequence was selected in **Sequences**.



15.7 Digital output settings

Purpose

The panel lets you set digital outputs, defining:

- activation methods (delay and length),
- alarms that can activate them (i.e.: Motion, input)



If SteelEye is used as a simple recorder, outputs need not be set.

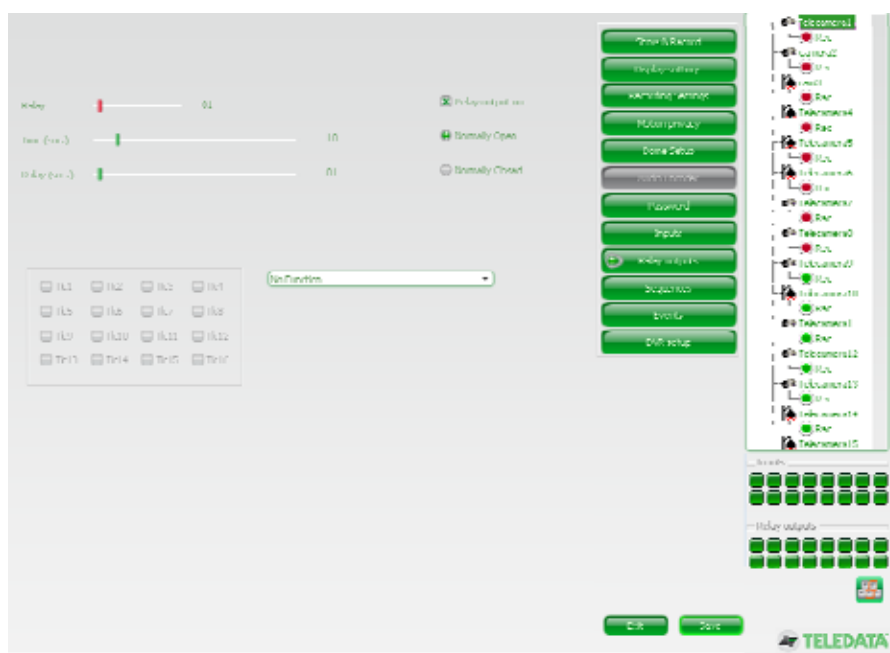


Output management is essential for those access control and surveillance operations where, for example, a buzzer should sound when a Motion alarm is triggered.

Path



Homepage, **Relay outputs**



Data	Description
Output	Select the output to be set.
Time (sec.)	Active signal time. The relay is de-energized at the end of this period.
Delay (sec.)	Delay applied to output activation.
Output on	Enables selected output control.
Normally open	The output is normally open and activates when the contact is closed.
Normally closed	The output is normally closed and activates when the contact is opened
OR selection	Selection of the video cameras where a motion or offline alarm are identified (OR Motion alarm and Video camera Offline functions).
-	Alarms that can activate the output: OR Motion Alarm: the output is activated when a Motion alarm is triggered on at least one of the selected video cameras or in OR selection. Motion alarm on video camera X: the output is activated when a Motion alarm is triggered on the selected video camera. Video camera offline: the output is activated when at least one video camera selected in the OR selection is offline. Video camera X offline: the output is activated when the selected video camera is offline. Sensor on: the output is activated when the associated input is on. No function: the output does not depend on alarms.

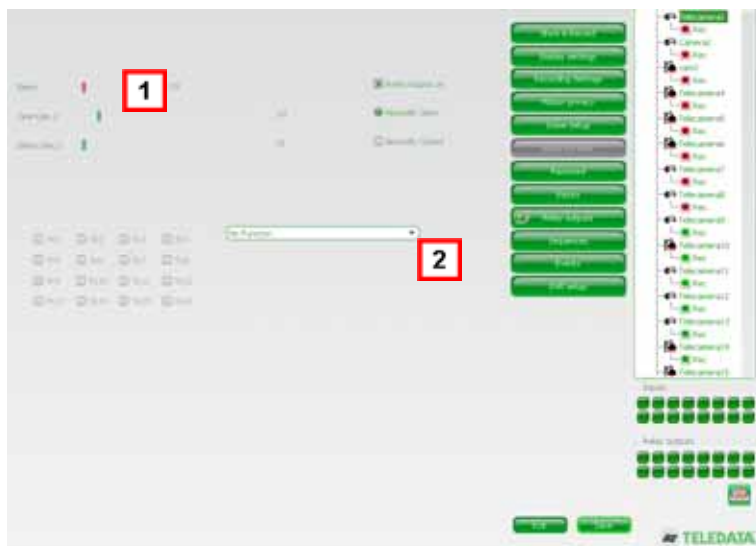
To set an output:



To link the output to a Motion alarm , **first set the alarm** in the **Motion privacy** panel.

To link the output to an input, **first set the input** in the **Input** panel.

1. Select the output and set signal features [1].
2. Select the function that activates the output [2].
3. Click **Output on**.
4. Click **Save**



15.8 Digital input programming and settings

Purpose

The **Input** panel lets you set digital inputs, setting signal features, on time and associated functions.

When a digital input's status changes, SteelEye can:

- Start recording
- Start a sequence
- Position a Speed Dome
- Activate a relay



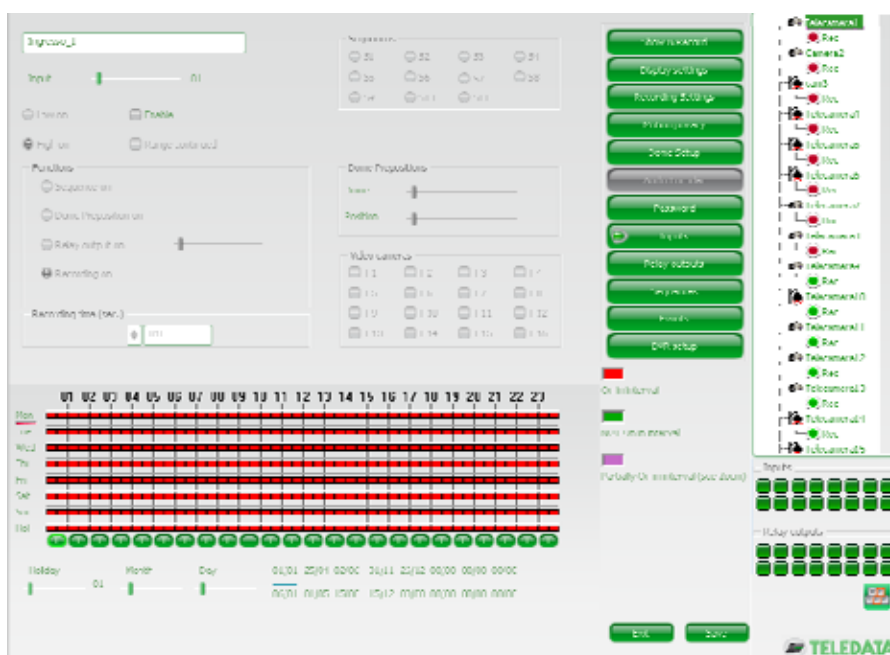
If SteelEye is used as a simple recorder, inputs need not be set.



Input management is essential for those access control operations where, for example, when a door opens, a Speed Dome focuses on the concerned area.

Path

Homepage,  , **Inputs**



Data	Description
Input	Select the input to be set.
High on	The input is normally closed and activates when the contact is opened
Low on	The input is normally open and activates when the contact is closed
Enable	Enables all selected input controls
Range continued	The input is only considered in certain time ranges. <i>See chapter 18.1 Setting time bands.</i>
Functions	Function run when the input turns on Sequence on: displays the selected sequence. Dome Preposition on: moves the Speed Dome to the selected position (see Dome prepositions).  The Speed Dome remains in the position until the next command, even in the case of impulse input. Relay output on: turns on the indicated output, only if the output was set with Input activation. <i>See chapter 15.7 Digital output settings.</i>  The output is turned on and off according to Time (sec.) and Delay (sec.) settings in the Output settings panel, even when there is an impulse input. Recording on: recording starts when an input's status changes for the recording time and on the indicated video cameras.  Recording is only started on the video cameras that are not recording when the change occurs.

Data	Description
Sequences	Select which sequence is started when the input turns on. See <i>chapter 15.6 Sequence settings</i> .
Recording time	Length in seconds of the recording started when the input's status changed.
Dome prepositions	Speed Dome to be moved when an input is turned on and the position it must assume. See <i>chapter 15.5 Speed Dome settings</i> .
Video cameras	Video cameras to be included in the recording.

To set an input:



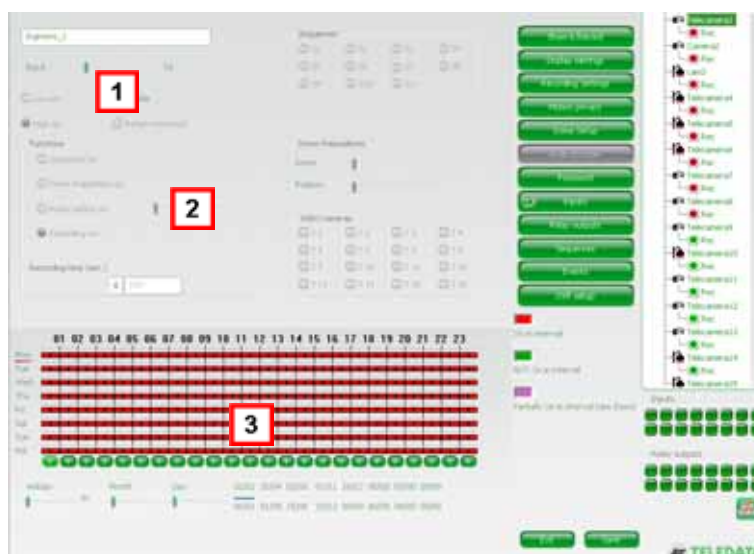
To start a sequence with the input **first set the sequence** in the **Sequence** panel.

To position a Speed Dome with the input, **first set the Speed Dome** in the **Dome Setup** panel.

To activate a relay with the input, **first set the output** in the **Relay output** panel.

To set an input:

1. Select the input **[1]** and enter the name to be assigned and its features.
2. Set the type of action to be taken **[2]**
3. Set any activation schedules **[3]**
4. Click **Enable** and **Save**



16. Administrator's operations

16.1 Password settings

Purpose

The panel lets you set three protected system login levels:

- Playback
- Programming
- System administrator

If no access level is set, the system provides free access to all functions (helpful during installation). If a user does not login after passwords are set, the system opens in **no login** status and restricts many system functions.



In those countries where privacy laws are in effect, this settings phase is mandatory.

The **Programming** and **Playback** access levels can only be set if the **Administrator** level was set.



After installation, setting passwords to protect both setting data and recordings is recommended.

Description

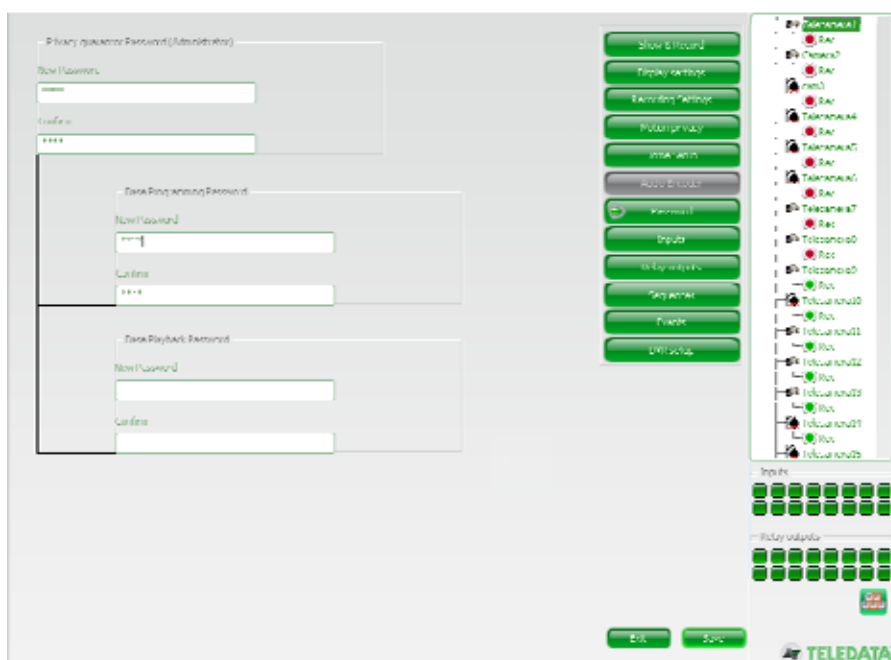
Functions enabled for the various access levels are listed below

	no login	Playback	Programming	System administrator
Display	X	X	X	X
Split	-	X	X	X
Speed control Dome	-	X	X	X
Alarm acquisition in progress	-	X	X	X
Configuration	-	-	X	X
Snapshot	-	-	X	X
Playback	-	X	-	X
Export data	-	-	-	X

Path

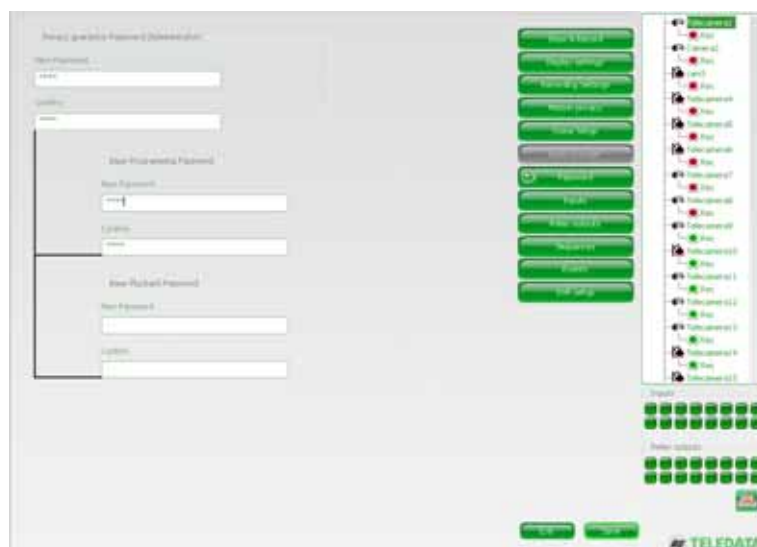


Homepage, , Password



To set a password:

1. Enter the password in each profile
2. Click **Assign**: the system opens in the **no login** level.
3. Click on **Save** and change the access level with 



16.2 General settings and machine shutdown

Purpose

The **Setup DVR** panel lets the user turn off the machine and set general DVR settings.



Machine shutdown and reboot may be useful to all network settings operations, hard-disk formatting or special service requests. Thus implementing password protected access levels is important. *See chapter 16.1 Password settings.*

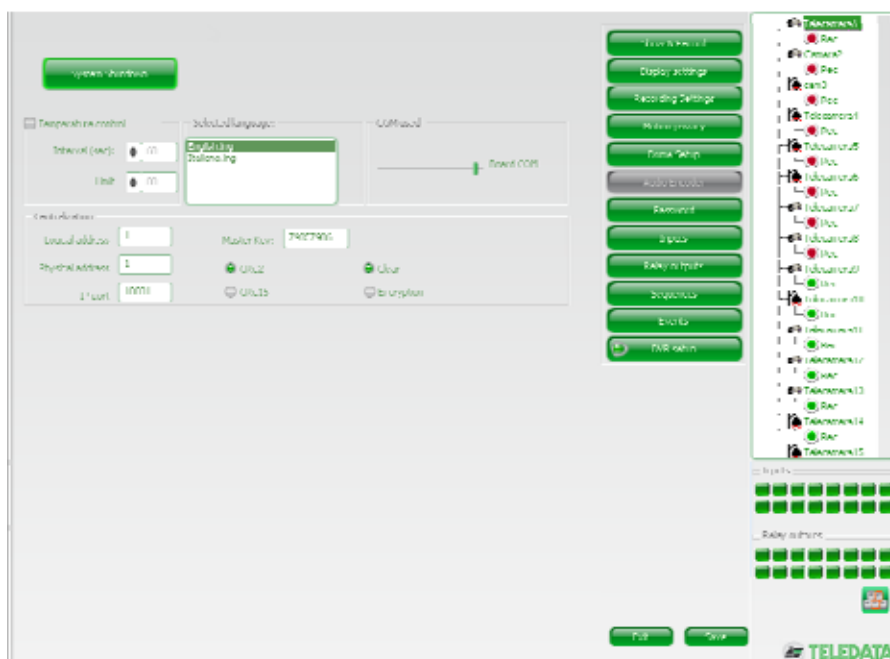
Path



Homepage, , **Setup DVR**



Reserved to the **Administrator** level or free, if no passwords are set.



Data	Description
System shutdown	Turn off the machine.
Temperature control	Prevents overheating problems, enabling computer temperature control. Generates a message in the log and sends a signal to the WinWatch supervisor. Interval: interval between one temperature control and the next Limit: maximum limit in °C beyond which the system signals a high temperature alarm.
Selected language	Set the interface language
COM used	Indicates the serial port connected to Speed Domes. - COM1 (37-pin connector) - COM2 (not installed) - COM (25-pin connector)  Only edit these settings if internal serial faults are suspected.
Centralization	Optional WinWatch supervision software communication data. Refer to software documentation to set this data.

16.3 Data disk formatting or other Windows operations

Purpose SteelEye can be started and a data disk can be formatted or maintenance activities performed on the operating system level.



Data disk formatting deletes:

- Recordings
- Snapshots



Reserved to the **Administrator** level.

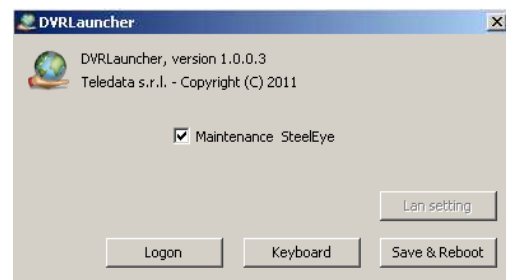
To start SteelEye as an Administrator:

1. Within 10 seconds of the window appearing, click **Maintenance SteelEye**: start up is paused and the user can logon.
2. Click **Logon** to enter the Administrator password.



If no keyboard is installed, click **Keyboard**.

3. The Windows tool bar appears with the **Clean Disk** function (quick data disk formatting) when the correct password is entered.



17. Remote access to SteelEye

17.1 From browser

Introduction The main SteelEye monitor can be viewed and, thus, access is provided to all functions through remote connection via a simple browser or remote control software (Virtual Network Computing – VNC).

The SteelEye IP address and machine login password are required for this function.

Connection from browser The procedure is described below:

1. Open the browser
2. Enter the IP address (xxx.xxx.xxx.xxx): the VNC authentication request appears.



If the Java installation request appears, confirm.

3. In **Option** select **Full color**.
4. Enter the machine login password (default **Admin25**): the main SteelEye monitor appears.

17.2 From NetEye Client

Introduction One or more video cameras connected to SteelEye can be viewed in real time and their recordings played back via NetEye Client.

The SteelEye IP address is required for this function.

NetEye Client installation Refer to the **NetEye – Client/Server settings** manual and install NetEye Client only.

18. Appendixes

18.1 Setting time bands

Purpose The function, used in various panels, is used to set time ranges for:

- recording (**Recording settings** panel)
- Motion and Blind alarm analysis (**Motion privacy** panel)
- input management

Description The function lets you set:

- a weekly calendar
- a holiday calendar applicable to up to 16 days

The length of the smallest period is five minutes.

Process Procedure to be followed:

1. Set the weekly and holiday calendar
2. Customize periods under a half an hour if necessary
3. Set holidays

Path



Homepage, panels:

- **Recording settings**
- **Motion privacy**
- **Inputs**



To set a weekly schedule:

1. Click on **Mon., Tue., Sun.**, for the half hours when the action should be turned on/off during the week.



To set holidays:

1. In **Holiday** move the cursor to the first free holiday.
2. In **Month** move the cursor to the month when the holiday occurs.
3. In **Day** move the cursor to the holiday: the holiday calendar will be applied to that day.



To set a calendar with periods under a half an hour:

1. Click on **Mon., Tue., Sun.** or **Hol**, for the half hours when the action should be turned on/off during the week.
2. Click : the detail of the half hour divided in five minute periods appears. Select the periods when the action should be turned on/off.



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